Write and Wrong: The Validity Of Graphological Analysis

How good is handwriting analysis in the prediction of specific personality traits?

Adrian Furnham

IT IS ONE of those nice but sad ironies that, as popular interest and especially commercial application of handwriting analysis, or graphology, is on the increase, scientific scrutiny of its claims remains limited and may be on the decrease. Like many of the other "ologies" that claim to be useful in describing and predicting human behavior, it has a long past, with many notable figures like Goethe speculating that somehow one may expect that a person's character is projected in the way he or she writes. The term *graphology* in fact was first used in 1871 by the French cleric Michon, who spent 30 years studying handwriting.

Since the beginning of this century there has been more and more interest in the topic, and it is difficult to go into any large bookstore without finding among the self-help, occult, or even psychology/social-science books some texts on how to analyze handwriting. These tomes tell you what factors to look at (i.e., size, slant, zone, pressure) and what traits (temperament, mental, social, work, and moral) are revealed. In fact there are schools of graphology, each with a slightly different history, approach, and "theory." However what appears missing most from the area is not a method of analysis so much as a theory of how or why individual differences are manifest in handwriting. For instance, is one to assume that personality traits are the result of genetic biological differences that predispose all social behavior, including handwriting, or is writing style, like other social behaviors, a product of complex primary, secondary, and tertiary education?

Despite the lack of any sound, illuminating, or indeed falsifiable theoretical base, there has been a great deal of interest in graphology by hard-pressed managers and administrators anxious for a valid and nonfalsifiable way of measuring the desirable and less desirable traits of employees. Dispassionate and disinterested research, however, has severely questioned the usefulness of graphological analysis.

A review of the literature shows, as ever, equivocal results. Some, albeit few, studies show extra-chance results linking handwriting to such personality traits as neuroticism, but a large number of studies reveal no clear pattern

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between graphological analysis and psychological assessment. Consider, for instance, the following conclusions taken from various studies:

1. "It was concluded that the analyst could not accurately predict personality from handwriting." This was based on a study of Vestewig, Santee, and Moss (1976) from Wright State University, who got six handwriting experts to rate 48 specimens of handwriting on 15 personality variables.

2. "No evidence was found for the validity of the graphological signs." This is from Lester, McLaughlin, and Nosal (1977), who used 16 graphological signs of extroversion to try to predict from handwriting samples the extroversion of 109 subjects whose personality test scores were known.

3. "Thus the results did not support the claim that the three handwriting measures were valid indices of extraversion." This is based on the study by Rosenthal and Lines (1978), who attempted to correlate three graphological indices with the extroversion scores of 58 students.

4. "There is thus little support here for the validity of graphological analysis." This was based on a recent study by Eysenck and Gudjonsson (1986), who employed a professional graphologist to analyze handwriting from 99 subjects and then fill out personality questionnaires as she thought would have been done by the respondents.

5. "The graphologists did not perform significantly better than a chance model." This was the conclusion of Ben-Shakhar and colleagues (1986) at the Hebrew University, who asked graphologists to judge the profession, out of eight possibilities, of 40 successful professionals.

6. "Although the literature on the topic suffers from significant methodological negligence, the general trend of findings is to suggest that graphology is not a viable assessment method." This conclusion comes from Klimoski and Rafael (1983), based at Ohio State University, after a careful review of the literature.

It is apparent that these tests of the validity of graphological analysis were very different and perhaps not entirely adequate.

Hans Eysenck, whose research in the area spans a 40-year period, and his Icelandic collaborator Gisle Gudjonsson have made the point that because there appear to be two different basic approaches to both the assessment of handwriting and personality (holistic vs. analytic), this leaves four basic types of analysis:

Holistic analysis of handwriting. This is basically impressionistic. The graphologist, using his or her experience and insight, offers a general description of the kind of personality he/she believes the handwriting discloses.

Analytic analysis of handwriting. This uses measurement of the constituents of the handwriting, such as slant, pressure, etc. These specific, objective, and tabulated measures are then converted into personality assessment on the basis of a formula or code.

Holistic analysis of personality. This too is impressionistic and may be done after an interview, when a trained psychologist offers a personality description on the basis of his/her questions, observations, and intuitions.

Analytic analysis of personality. This involves the application of psycho-

metrically assessed, reliable, and valid personality tests (questionnaires, physiological responses to a person, and the various grade scores obtained).

As a result of this fourfold classification there are quite different approaches to the evaluation of the validity of graphological analysis in the prediction of personality. These are:

1. Holistic matching, which is the impressionistic interpretation of writing matched with an impressionistic account of personality.

2. Holistic correlation, which is the impressionistic interpretation of writing correlated with a quantitative assessment of personality.

3. Analytic matching, which constitutes the measurement of the constituents of the handwriting matched with an impressionistic account of personality.

4. Analytic correlation, which is the measurement of the constituents of the handwriting correlated with a quantitative assessment of personality.

Clearly, of these four widely used methods, the final analytic correlational method is the most empirically based. A colleague (Barrie Gunter) and I decided to do a study along the lines of the analytic correlational method advocated by Hans Eysenck.

We had 64 adults of highly diverse backgrounds, ages, and professions do two things. First they copied out a text (of about 100 words) on the topic of tea onto a sheet of white unlined paper. They were each given identical, recently sharpened pencils to do the job. They also filled out the Eysenck Personality Questionnaire, which purports to measure the three fundamental dimensions of personality: extroversion-introversion, neuroticism, and psychoticism. The literature on the reliability and validity of this measure is voluminous and the dimensions it measures have been shown to relate consistently and theoretically predictably to physiological, psychopathological, cognitive, and social variables.

The personality questionnaire yields three scores for each subject. In order to do an analytic appraisal of the handwriting a number of graphological books were consulted to ascertain which factors to look at. There was no apparent agreement on which factors were most important, or indeed on what particular styles indicated. Nevertheless it was decided to select a dozen or so of the factors most commonly referred to. They were: size of writing; percentage of the page used; slant of letters; width of words; connectedness of letters with words; pressure on the page; spacing of words; regularity of crossed t's; regularity of dotted i's; where the t's are crossed; where the i's are dotted; and finally whether the subject loops letters below the line or above the line.

Each factor was rated on a 3- or 5-point scale. For example, slant was rated as 5 points (1 = extreme left, 2 = moderate left, 3 = upright, 4 = moderate right, 5 = extreme right) and pressure as 3 points (1 = slight, 2 = moderate, 3 = great).

The 64 writing specimens, all of the same passage, were then given to two independent judges, neither of whom was a graphologist, who rated each script according to the 13 factors. In order to check the reliability of their

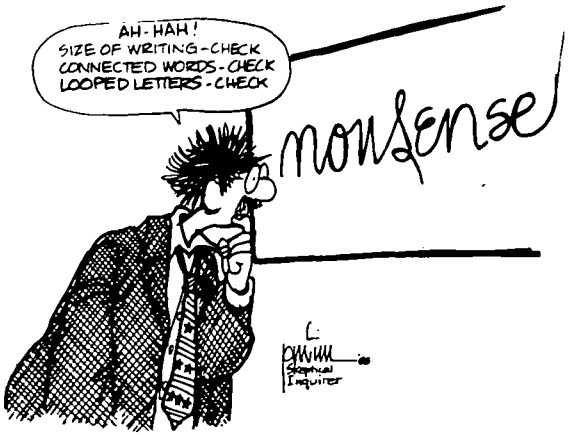
assessment a correlation coefficient was calculated. It turned out to be nearly 90 percent (5 = .89). A third judge then examined all scripts and resolved the disputed 10 percent. This meant that each subject was left with 13 different objective measures of his/her handwriting.

The whole point of the analytic correlational method is that objective and quantitative measures of both personality and handwriting are correlated. More than 70 correlations were computed. Less than 6 percent proved significant—one with extroversion and three with neuroticism, indicating that neurotics tended to have small handwriting, with a left slant and consistently dotted i's.

Despite numerous other statistical evaluations, including analysis of variance, multiple regression, and discriminant analysis, none of the results proved significant. Thus we were forced to conclude, as others had done before us, that graphological analysis was invalid. In fact we concluded thus: "Even if graphological analyses were valid, the *theoretical* basis of the method appears weak, nonexplicit, and nonparsimonious. Furthermore, it is unclear why it should be used if clearly valid and reliable measures exist to measure the same thing (i.e., personality) more cheaply, accurately, and efficiently. Perhaps one should be forced to conclude, rather uncharacteristically for researchers, that no further work needs to be done in the field" (Furnham and Gunter 1987, p. 434).

It would be wise to anticipate criticisms of this relatively small study and to consider possible responses:

• The 13 variables missed out on all or some of the critically important graphological variables. Indeed, I had correspondence with a graphological consultant who suggested both *speed* of handwriting (supposedly a determinant of naturalness, genuineness, and spontaneity in personality) and consistency of height and slant (supposedly an index of balance and control in life) were crucial. The consultant did not dispute the importance of other factors. This may well have been a valued criticism if there has been an



agreed-upon set of criteria. I happened to use a number of text books and to attempt some consensus.

• Experienced graphologists would have come to different conclusions. The point of this study was to derive reliable, objective, numeric indices of handwriting, not impressionistic accounts. Graphologists could have been used, but the crucial factor was the reliability of the judge. This was in fact achieved, and hence meant experienced graphological analysis was rendered redundant.

• Graphology does not relate to the three major variables predicted, namely, extroversion, neuroticism, and psychoticism. This is simply false, as it most frequently purports to do just this.

• The personality test was at fault; whereas graphology does predict personality, psychometricized questionnaires do not. While the absolute validity of nearly all (and particularly some) questionnaires remains in doubt, there is more than sufficient empirical evidence for the validity of the test used here.

Many graphologists consider psychological evaluation of their "trade" a threat. Graphologists, it seems, tend to regard psychological research as cynical rather than—as I believe it actually is—skeptical. Research into the validity of graphology has, for all its faults, appeared to be disinterested. But even if graphology had merits and was valid, it would remain nothing less than a technique in search of a theory.

Ben-Shaktar and his Israeli colleagues (1986, p. 652) have thoughtfully concluded thus:

> 1. Although it would not be surprising if it were found that sloppy handwriting characterized sloppy writers, stylized calligraphy indicated some artistic flair, and bold, energetic people had bold, energetic handwriting, there is no reason to believe that traits such as honesty, insight, leadership, responsibility, warmth, and promiscuity find any kind of expression in graphological features. Some may have no somatic expression in graphological features. Some may have no somatic expression at all. Indeed, if a correspondence were to be empirically found between graphological features and such traits, it would be a major theoretical challenge to account for it.
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> 2. There are not enough constraints in graphological analysis, and the very richness of handwriting can be its downfall. Unless the graphologist makes firm commitments to the nature of the correspondence between handwriting and personality, one can find ad hoc corroboration for any claim.
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> 3. The a priori intuitions supporting graphology listed above operate on a much wider range of texts than those graphologists find acceptable. As graphologists practice their craft, it appears that from a graphological viewpoint, handwriting—rather than being a robust and stable form of expressive behavior—is actually extremely sensitive to extraneous influences that have nothing to do with personality (e.g., whether the script is copied or not, or the paper lined or not).
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> 4. It is noteworthy that most graphologists decline to predict the sex of the writer from handwriting, although even lay people can diagnose a writer's sex from handwriting correctly about 70% of the time. They explain this by insisting that handwriting only reveals psychological, rather than biological, gender. Al-

though common sense would agree that some women are masculine and some men are effeminate, it would be somewhat perverse to argue against the presumption that most women must be feminine and most men masculine. Could the graphologists simply be reluctant to predict so readily verifiable—or falsifiable—a variable?

Readers of this journal will know of the techniques of cold reading and be able to understand why graphology appears to work and why so many (otherwise intelligent) laypeople believe in it. The growth of graphology may be due to the inability of empirical scientists to discover or invent a simple, single, robust, and predictive measure of personality. But one cannot allow graphologists to fill this void, given that from any objective and dispassionate evaluation of their wares, graphology is quite simply invalid.

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A bibliography of books and articles on graphology is available upon request from the CSICOP office in Buffalo. A session on graphology will be presented at the 1988 CSICOP Conference in Chicago in November.—ED.